Abstract

[0154] Dendritic cells and macrophages can process extracellular antigens for presentation by MHC-I molecules. HIV-1 epitopes derived from incoming virions are presented through the exogenous MHC-I pathway in primary human dendritic cells, and to a lower extent in macrophages, leading to cytotoxic T lymphocyte activation in the absence of viral protein neosynthesis. Exogenous antigen presentation required adequate virus-receptor interactions and fusion of viral and cellular membranes. These results provide new insights about how anti-HIV cytotoxic T lymphocytes can be activated and are useful for anti-HIV vaccine design.